

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Yasuhisa Nakajima et al.

Serial No. : Continuation of 08/993,993

For : RECORDING/REPRODUCTION APPARATUS,
RECORDING/REPRODUCTION METHOD, INPUT/OUTPUT
APPARATUS, INPUT/OUTPUT METHOD, STORAGE
APPARATUS, TRANSMISSION APPARATUS, INFORMATION
PROCESSING APPARATUS AND INFORMATION
PROCESSING METHOD

Filed : herewith

Examiner : T. Tran (parent application)

Art Unit : 2615 (parent application)

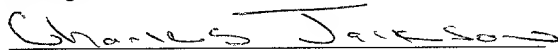
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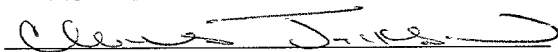
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PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Prior to examining the above-referenced continuation application on the merits, please
enter the following amendment:

IN THE TITLE:

Please amend the title to read as follows: --RECORDING/REPRODUCTION
APPARATUS CAPABLE OF EXCHANGING INFORMATION WITH STORAGE
APPARATUS MOUNTED ON RECORDING MEDIUM ASSEMBLY--.

IN THE SPECIFICATION:

Please amend the specification as follows:

Page 1, after the title, please add the following paragraph: --This application is a
continuation of application S/N 08/993,993, filed December 18, 1997.--

Amend the paragraph beginning at line 6 on page 3 as follows:

--In addition, for cassette tapes and discs for use in a rental business, rental data is
controlled typically by using a ledger or a PC. In this case, a bar code representing control
information such as the serial number of a cassette tape or a disc is printed on a label such as a
seal which is then stuck to the cassette tape or the disc.--

Amend the paragraph beginning at line 13 on page 3 as follows:

--In the case of an index card, however, the user himself must enter information
on data recorded in the cassette tape or disc such as a recording date and a recording time by
either writing the information by hand or printing it, raising a problem of very cumbersome
work.--

Amend the paragraph beginning at line 19 on page 3 as follows:

--In addition, as time goes by after data has been recorded, the user may forget the
contents of the recording medium such as a cassette tape. In this case, the user verifies the
contents of the cassette tape by playing back, rewinding or fast feeding the tape and then

entering information on data recorded in the cassette tape including a recording date and a recording time, giving rise to a problem of cumbersome work.--

Amend the paragraph beginning at line 24 on page 14 as follows:

--As described in claim 3, the recording/reproduction apparatus according to claim 1 is characterized in that the recording/reproduction apparatus further has a medium accommodating means (implemented typically by a compartment 93 shown in Fig. 9) for accommodating the recording-medium assembly and the switching means switches the information transmitting/receiving means from one to another in accordance with whether or not the recording-medium assembly exists in the medium accommodating means.--

Amend the paragraph beginning at line 22 on page 31 as follows:

--A compartment 93 forms a space for accommodating a cassette 100. A switch 94 is used for detecting whether or not a cassette 100 has been inserted into the compartment 93. The antenna 22-2 for communicating with a memory card 1 mounted on a cassette 100 existing outside the VTR 41 is designed to provide extremely high directivity to an electric wave radiated thereby, that is, directivity that does not have an effect on internal components of the VTR 41. To put it concretely, a metallic plate 92-2 is provided on the back surface of the antenna 22-2 to prevent an electric wave radiated by the antenna 22-2 from being directed to the inside of the VTR 41.--

Amend the paragraph beginning at line 15 on page 33 as follows:

--As described above, the switch 94 is used for forming a judgment as to whether a cassette 100 exists in the inside or the outside of the VTR 41. More specifically, when a cassette 100 is inserted into the compartment 93, the switch 94 is pushed by the case of the cassette 100, detecting the insertion of the cassette 100 into the compartment 93. At that time, a

signal indicating the insertion of the cassette 100 into the compartment 93 is supplied to the microcomputer 95 from the switch 94. In this way, the microcomputer 95 is capable of forming a judgment as to whether a cassette 100 exists in the inside or the outside of the VTR 41.--

Amend the paragraph beginning at line 2 on page 38 as follows:

--As information on the current position, data representing a halt position of the cassette 100 is stored. For example, data representing the time that has lapsed since the start of an operation to reproduce data is stored in terms of hours, minutes, seconds and frames. Accordingly, when a cassette 100 is mounted on the VTR 41 after being taken off once from the VTR 41, the current position of the cassette 100 can be displayed instantaneously. As a result, the operability of the VTR 41 can be improved.--

Amend the paragraph beginning at line 10 on page 42 as follows:

--Fig. 14 is a diagram showing a typical data structure of the video-recording-reservation data area shown in Fig. 11. The video-recording-reservation data area is used for storing information on a timer-based video-recording reservation. The microcomputer 95 employed in the VTR 41 reads in the information on a timer-based video-recording reservation through the reader/writer 21, comparing the information with the present time and date. If the information on a timer-based video-recording reservation is found valid, the microcomputer 95 sets the information in a timer circuit not shown in the figure, putting the VTR 41 in a video-recording reservation state. This function is simpler than the ordinary video-recording-reservation function which is executed by the user by operating the VTR 41 or a remote commander. This function is yet convenient for repeatedly recording an event such as a regular daily program.--

Amend the paragraph beginning at line 4 on page 60 as follows:

--When the VTR 41 is put in a video-recording state without entering the title of a program using an EPG etc., there is concern that the title of the program is not input. That is to say, since a video-recording reservation etc. is made by the user by utilizing a screen such as the EPG, information on a program such as the title of the program can be obtained beforehand. When carrying out ordinary video recording, however, it is probable that information on a recorded program can not be obtained. In other words, since an EPG is supplied at time intervals of about five minutes to three hours, depending on the substance of the service, the title of a desired program can not be obtained in a real-time manner in some cases.--

Amend the paragraph beginning at line 18 on page 73 as follows:

--In addition, various kinds of information pertaining to data recorded in a cassette or disc can be stored in the memory card 1 and the information can be used for simplifying operations to display the data, to reproduce a program, to make a timer-based video-recording reservation and to search a tape for a start position, to mention a few.--

Amend the paragraph beginning at line 7 on page 76 as follows:

--Fig. 26 is a block diagram showing another typical configuration of the memory card 1 and the reader/writer 21. As shown in the figure, in this configuration, the antenna 2 employed in the memory card 1 is implemented by a coil 211 whereas the antenna 22 employed in the reader/writer 21 is implemented by a coil 232. Mutual electromagnetic inductive coupling is established between the coils 211 and 232.--

Amend the paragraph beginning at line 21 on page 78 as follows:

The flow of processing then goes on to a step S62 at which the gate sequencer 201 forms a judgment as to whether or not data has been received from the memory card 1. It should be noted that the judgment can be formed by finding out whether or not the level of the carrier

has changed. If no data has been received from the memory card 1, the flow of processing proceeds to a step S63 to form a judgment as to whether or not a predetermined period of time t_0 of typical $250\ \mu\text{s}$ which is set in advance has lapsed since completion of the transmission of the data. If the predetermined period of time t_0 has not lapsed, the flow of processing returns to the step S62 at which the gate sequencer 201 again forms a judgment as to whether or not data has been received from the memory card 1. Thereafter, the pieces of processing of the steps S62 and S63 are carried out repeatedly.

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IN THE CLAIMS:

Please cancel claims 1-22.

Please add claims 23 – 58 as follows:

--23. (New) Recording/reproduction apparatus comprising:

recording/reproducing means for recording or reproducing data into and from a recording medium of a recording-medium assembly, said recording medium assembly having a storage apparatus mounted thereon for storing predetermined information;

first information transmitting/receiving means for transmitting and receiving said information to and from said storage apparatus under a first condition;

second information transmitting/receiving means for transmitting and receiving said information to and from said storage apparatus under a second condition different from said first condition;

switching means for switching between said first and second information transmitting/receiving means based on the presence of said first or second condition;

reading means for reading out said information stored in said storage apparatus through the first or second information transmitting/receiving means selected by said switching means; and

information supplying means for supplying update information for updating said information stored in said storage apparatus through one of said first or second information transmitting/receiving means selected by said switching means.--

--24. (New) The recording/reproduction apparatus of claim 23 wherein said information is information pertaining to data recorded in said recording medium assembly.--

--25. (New) The recording/reproduction apparatus of claim 23 further having a power supplying means for supplying power to said storage apparatus.--

--26. (New) The recording/reproduction apparatus of claim 23 wherein said information is pre-set information.--

--27. (New) The recording/reproduction apparatus of claim 23 wherein said information includes identification data for identifying said data recorded in said recording-medium assembly.--

--28. (New) The recording/reproduction apparatus of claim 25 wherein said storage apparatus comprises:

storage means for storing said information;

power inputting means for inputting power from a power supplying means;

information providing means for providing said information stored in said storage means to said reading means through one of said information transmitting/receiving means; and

information updating means for updating said information stored in said storage means with said update information supplied by said information supplying means through one of said information transmitting/receiving means.--

--29. (New) The recording/reproduction apparatus of claim 23, wherein said first information transmitting/receiving (T/R) means is a first wireless T/R device and said second information transmitting/receiving means is a second wireless T/R device.--

--30. (New) The recording/reproduction apparatus of claim 29, wherein said first wireless T/R device is a first antenna and said second wireless T/R device is a second antenna.--

--31. (New) Recording/reproduction method, comprising:

recording or reproducing data into and from a recording medium of a recording-medium assembly having a storage apparatus for storing predetermined information mounted thereon;

selecting one of at least first and second information transmitting/receiving means for use in an operation to at least read out said information from said storage apparatus through the selected one of said first and second information transmitting/receiving means under first and second conditions, respectively; and

reading out said information from said storage apparatus through said selected first or second information transmitting/receiving means and updating said information stored in said storage apparatus through said selected first or second information transmitting/receiving means.--

--32. (New) The recording/reproduction method of claim 31, wherein said first information transmitting/receiving (T/R) means is a first wireless T/R device and said second information transmitting/receiving means is a second wireless T/R device.--

--33. (New) The recording/reproduction method of claim 32, wherein said first wireless T/R device is a first antenna and said second wireless T/R device is a second antenna.--

--34. (New) Input/output apparatus for reading out and writing information pertaining to data from and into a storage apparatus mounted on a recording-medium assembly having a recording medium upon which said data is recorded, said input/output apparatus comprising:

information transmitting/receiving means for transmitting and receiving said information to and from said storage apparatus;

information reading means for reading out said information received through said information transmitting/receiving means and stored in the storage apparatus;

information outputting means for outputting said information read out by said information reading means; and

information updating means for updating said information received through said information transmitting/receiving means, wherein said updated information is transferred to said storage apparatus for storage therein;

wherein said recording medium assembly is a cassette containing a tape, and said updated information includes a current shuttle position of said tape.--

--35. (New) The input/output apparatus of claim 34, wherein said information pertaining to said data is table of contents information of said data recorded on said recording medium of said recording medium assembly.--

--36. (New) The input/output apparatus of claim 34 wherein said information transmitting/receiving means transmits said information to said storage apparatus intermittently at a predetermined period.--

--37. (New) The input/output apparatus of claim 36 wherein said information transmitting/receiving means shortens said period at which said information is transmitted to said storage apparatus when information is received from said storage apparatus.

--38. (New) Input/output apparatus for reading out and writing information pertaining to data from and into a memory card mounted on a recording-medium assembly having a recording medium upon which said data is recorded, said input/output apparatus comprising:

information transmitting/receiving means for transmitting and receiving said information to and from said memory card;

information reading means for reading out said information received through said information transmitting/receiving means and stored in said memory card;

information outputting means for outputting said information read out by said information reading means; and

information updating means for updating said information received through said information transmitting/receiving means;

wherein said updated information is transferred to said memory card for storage therein.--

--39. (New) Input/output apparatus for reading out and writing information pertaining to data from and into a storage apparatus mounted on an optical disc having a recording medium upon which said data is recorded, said input/output apparatus comprising:

- information transmitting/receiving means for transmitting and receiving said information to and from said storage apparatus;
- information reading means for reading out said information received through said information transmitting/receiving means and stored in said storage apparatus;
- information outputting means for outputting said information read out by said information reading means; and
- information updating means for updating said information received through said information transmitting/receiving means;

wherein said updated information is transferred to said storage apparatus for storage therein.--

--40. (New) The input/output apparatus of claim 39 wherein said storage apparatus is a memory card.--

--41. (New) Input/output method for reading out and writing information pertaining to data from and into a storage apparatus mounted on a recording-medium assembly having a recording medium upon which said data is recorded, said method comprising the steps of:

- reading out said information from said storage apparatus;

outputting said information read out from said storage apparatus; and
updating said information pertaining to said data, and transferring said updated
information to said storage apparatus for storage therein;
wherein said recording medium assembly is a cassette containing a tape, and said
updated information includes a current shuttle position of said tape.--

--42. (New) The input/output method of claim 41 wherein said information
pertaining to data is table of contents information of said data recorded on said recording
medium of said recording medium assembly.--

--43. (New) The input/output method of claim 41 wherein said storage apparatus
is a memory card.--

--44. (New) Storage apparatus for storing information as well as transmitting and
receiving information to and from a substantially larger external apparatus normally having
power supply means to power functions thereof, said storage apparatus comprising:

storage means for storing said information;

power inputting means for inputting operating power supplied by said external
apparatus, said operating power serving to power electronics of said storage apparatus;

information supplying means for providing said information stored in said storage
means to said external apparatus; and

information updating means for updating said information stored in said storage
means with said information received from said external apparatus.--

--45. (New) The storage apparatus of claim 44 wherein:

said storage apparatus is attached to a recording-medium assembly for recording data; and

said storage apparatus is used for storing information to be added to said data recorded in said recording-medium assembly and/or to be used for updating said data.--

--46. (New) The storage apparatus of claim 44 wherein said storage apparatus is configured to be mounted on a recording medium assembly removably insertable into said external apparatus.--

--47. (New) The storage apparatus of claim 44, further comprising in combination therewith, a recording medium assembly to which said storage apparatus is mounted, said recording medium assembly being removably insertable into said external apparatus and having a recording medium upon which data is recorded, wherein said information stored on said storage means pertains to the data recorded on said recording medium.-

--48. (New) The storage apparatus of claim 47, wherein said recording medium assembly is a tape housing.--

--49. (New) The storage apparatus of claim 47, wherein said recording medium assembly is an optical disc.--

--50. (New) The storage apparatus of claim 47, wherein said storage apparatus has recorded thereon information to be added to said data recorded on said recording medium.--

--51. (New) The storage apparatus of claim 44, wherein said storage apparatus is a memory card.--

--52. (New) Recording/reproduction apparatus comprising:

a receiving part for receiving data superposed with predetermined information;

a recording part operative to record said received data onto a recording medium of a recording medium assembly that is removably inserted into said recording/reproduction apparatus;

said recording medium assembly having a storage apparatus mounted thereon;

and

a transmission part for transmitting said received predetermined information to said storage apparatus mounted on said recording medium assembly for storage thereon.--

--53. (New) The recording/reproduction apparatus of claim 52 wherein said received predetermined information is information pertaining to said data.--

--54. (New) The recording/reproduction apparatus of claim 52 wherein said storage apparatus comprises:

storage means for storing said information;

power inputting means for inputting operating power supplied by said recording/reproduction apparatus, said operating power serving to power electronics of said storage apparatus;

information supplying means for providing said information stored in said storage means to said recording/reproduction apparatus when said recording medium assembly is subsequently inserted therein; and

information updating means for updating said information stored in said storage means with said information received from said recording/reproduction apparatus.--

--55. (New) The recording/reproduction apparatus of claim 52 wherein said information is superposed with said data via insertion of said information into an interval of a vertical-synchronization signal of a broadcasted signal conveying said data.--

--56. (New) The recording/reproduction apparatus of claim 52, wherein said transmission part comprises at least one antenna for wirelessly transmitting the predetermined information to an antenna within said storage apparatus.--

--57. (New) The recording/reproduction apparatus of claim 52 wherein said recording medium is a tape, said recording medium assembly is a tape housing, and said storage apparatus is a memory card.--

--58. (New) The recording/reproduction apparatus of claim 52 wherein said predetermined information includes title information for a program represented by said data.—

IN THE ABSTRACT:

Please replace the abstract with the following new abstract:

--Recording/reproduction apparatus and method in which data is recorded into or reproduced from a recording medium of a recording-medium assembly (e.g., tape cassette or disc) having a storage apparatus (e.g., memory card) for storing predetermined information mounted thereon. A selection is made between one of at least first and second T/R devices for use in an operation to at least read out the information from the storage apparatus through the first or second T/R device under first or second conditions, respectively. The recording/reproduction apparatus may update the information on the storage apparatus in accordance with changes in the material recorded on the recording medium. The recording/reproduction apparatus may be adapted to provide operating power to electronics within the storage apparatus.--

REMARKS

This preliminary amendment makes proper reference to the parent application, and replaces original claims 1-22 with new claims 23-58. The title and specification are amended as was done in the parent application of this application. The abstract is updated for consistency with the newly presented claims.

In the parent application of this continuation application, i.e., application S/N 08/993,993, a final Office Action issued on June 8, 2001 in which claims 1, 2, 5-16, 19-26 and 28-41 were rejected. The present preliminary amendment replaces these claims with claims 23-58, which are believed to be patentably distinguishable from the prior art of record.

Patentability of Claims 23-33

New independent claims 23 and 31 are similar in scope to independent claims 1 and 9, respectively, of the parent application as they stood at the time of the final Office Action. The examiner had finally rejected claims 1-2, 5-10, 14, 23-24, 29 and 32 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,101,070 (“Oguro”).

Applicants submit that claims 23-33 as presented herein are patentably distinguishable from Oguro. Contrary to claim 23, for example, Oguro (which is assigned to Sony Corporation, the assignee of the present invention) does not disclose a recording/reproduction apparatus that includes all of the following:

“first information transmitting/receiving means for transmitting and receiving said information to and from said storage apparatus under a first condition;

second information transmitting/receiving means for transmitting and receiving said information to and from said storage apparatus under a second condition different from said first condition;

switching means for switching between said first and second information transmitting/receiving means based on the presence of said first or second condition”

First, it should be understood from the plain meaning of claim 23 that the first information transmitting/receiving (T/R) means is a different element than the second information transmitting/receiving (T/R) means. An example of a first transmitting/receiving means is a first antenna (e.g., item 22-1 of FIG. 9 in the Applicants’ drawings); and an example of a second transmitting/receiving means is a second antenna (e.g., item 22-2 of FIG. 9). Other examples are also possible; however, it is readily apparent that the same component does not serve as both the first and second T/R means of claim 23.

The final Office Action asserted that Oguro discloses a first information transmitting/receiving means at col. 23, lines 6-17, and a second information

transmitting/receiving means at col. 26, line 56 to col. 27, line 61. The passage at col. 23 refers to the flowchart of FIG. 54, which references the schematic diagram of FIG. 53B. As shown in FIG. 53B, a MIC 62 is connected to a VCR through three terminals 65a, 65b and 65c. A serial I/F 69 connected to terminal 65c is used to exchange data between the MIC and the controller 10. A clock generator 68 connects to terminal 65b, and a resistor 66a with a switch 67 coupled in parallel thereacross is connected to terminal 65a. When switch 67 is turned on, data is allowed to be exchanged by means of the serial interface 69 through terminal 65c.

The cited passages of cols. 26-27 refer to FIGS. 68-70, which relate primarily to the format of data transfer to the tape, not to the MIC. Thus these passages are largely irrelevant to the Applicants' claimed first and second information transmitting/receiving means, which pertain to information exchange to and from the storage apparatus mounted on the recording medium assembly, not to the recording medium (e.g., tape or disc storage) within the recording medium assembly. Oguro does mention, in col. 27 lines 55-61 that the generation, erasure, and the like of the new event on the MIC can be executed by merely a block transfer of the memory. This block transfer, however, would occur through the same serial I/F 69 shown in FIG. 53B used for data transfer in the process of FIG. 54. Thus, Ogura only uses a single transmitting/receiving means to exchange data between the MIC 52 and the VCR; and thus does not meet the recitation of first and second T/R means as in Applicants' claim 23.

Further, as Oguro employs only a single T/R means, he does not utilize a switching means for switching between first and second information transmitting/receiving means as recited in claim 23.

Accordingly, in light of the above distinctions it is readily apparent that claim 23 is not anticipated by Oguro under §102(e).

For analogous reasons, Oguro does not anticipate method claim 31. In particular, for the same reasons discussed above, the method in Oguro does not include the step of selecting one of at least first and second information transmitting/receiving means for use in an operation to at least read out information from a storage apparatus.

Claims 24-30 and 32-33 are patentable based at least upon their respective dependencies from claims 23 or 31.

Patentability of Claims 34-43

New independent claims 34 and 41 are similar in scope to claims 11 and 25, respectively, of the parent application as they stood at the time of the final Office Action. Claims 11 and 25 were finally rejected under 35 U.S.C. 103(a) over Oguro in view of U.S. Patent No. 5,488,409 to Yuen et al.

New independent claims 38 and 39 are similar in scope to claims 31 and 30, respectively, of the parent application as they stood at the time of the final Office Action. The latter claims were finally rejected over Oguro in view of U.S. Patent No. 6,192,191 B1 to Suga et al.

It is submitted, however, that the Oguro patent reference is disqualified as §103 prior art to the present application under the provisions of 35 U.S.C. 103(c). Under the provisions of 35 U.S.C. 103(c), as amended on November 29, 1999, subject matter developed by another person, which qualifies as prior art only under one of more of subsections (e), (f) and (g) of 35 U.S.C. 102, shall not preclude patentability under §103 where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

The Oguro patent and the present application were, at the time the present invention was made, subject to an obligation of assignment to the same organization, i.e., Sony Corporation. Such obligation is evidenced by the recording of assignment documents in the U.S. Patent and Trademark Office for the Oguro patent and in the parent application of this application. The Oguro patent issued on August 8, 2000, which was well after the U.S. filing date of December 18, 1997 of the present application. Thus, the Examiner has relied upon Oguro in a rejection under 35 U.S.C. 103 through 35 U.S.C. 102(e).

The Guidelines Concerning the Implementation of Changes to 35 U.S.C. 102(g) and 103(c) in the American Inventors Protection Act of 1999 explain that the change to §103(c) applies to any patent application filed on or after November 29, 1999, including continuation applications. As the present continuation application falls into this category, the changes to §103(c) apply to the present application.

Accordingly, in view of the above, the Oguro patent cannot be used as prior art in a rejection under 35 U.S.C. 103(a); and thus all the rejections under §103 based upon the Oguro patent cannot stand.

Patentability of Claims 44-51

Independent claim 44 is similar in scope to claim 15 of the parent application as amended in the Applicants' Amendment After Final Rejection filed August 10, 2001. Claim 44 is directed to a storage apparatus for storing information as well as transmitting and receiving information to and from a substantially larger external apparatus normally having power supply means to power functions thereof, which includes, inter alia:

“power inputting means for inputting operating power supplied by said external apparatus, said operating power serving to power electronics of said storage apparatus.”

Claim 15 was finally rejected under §103(a) as being unpatentable over Yuen. Applicants respectfully traverse this rejection with respect to new claim 44. The position in the Office Action was that Yuen discloses all the features of the claim except for providing that the power inputting means inputs operating power supplied by the external apparatus. It was asserted that the using of power inputting means for inputting operating power supplied by the external apparatus has a disadvantage because it would increase the size of the external apparatus. The Examiner relied upon *In re Japikse* which held that there would be no invention in shifting the starting switch disclosed by Cannon to a different position since the operation of the device would not thereby be modified (whether one apparatus can be made smaller and other apparatus would be bigger). The Examiner concluded that since the device of Yuen would not be modified if shifting the backed up battery of RAM 33, there would be no invention.

Claim 44, however, clarifies that the external apparatus (e.g., such as a VCR or computer) is substantially larger than the storage apparatus (e.g., such as a memory card), and that the external apparatus normally has power supply means to power functions thereof. As a result, the Examiner's conclusion in regard to the hypothetical disadvantage is traversed. In particular, the Examiner surmised that by including a battery in the external apparatus, the external apparatus would be made larger. This is not the case with the present invention, since the external apparatus normally has power supply means for its own functions, and thus the same power supply means might be used to supply power to the storage apparatus. Moreover, the external apparatus is substantially larger than the storage apparatus, and therefore even if a small circuit were to be included therein for supplying (or routing) the operating power, any resulting increase in size would be negligible. Further, it should be apparent that the external apparatus

might not incur any size increase at all, since the power could originate from another power source normally supplying power to the external apparatus, such as a voltage line that the external apparatus plugs into.

The Examiner's conclusion of obviousness based on *In re Japikse* is misplaced for another reason: there is another distinct advantage in supplying the storage apparatus of claim 44 with operating power from the external apparatus. That is, the storage apparatus need not employ its own battery and therefore, the user is not burdened with monitoring battery levels and replacing batteries when needed. As a result, the expected lifetime of the storage apparatus is lengthened. As is apparent from the specification, one of the possible applications of the storage apparatus of claim 44 is by mounting the same on a video cartridge or the like. Obviously, it would be a benefit to the user to avoid the necessity of replacing batteries for such a storage apparatus. Accordingly, the present invention of claim 44 does not simply amount to moving a component from one position to another as in the Examiner's analogy. Indeed, the numerous advantages of the invention of claim 44 are objective indicia of its nonobviousness.

Claims 45-51 are patentable based at least upon their dependencies from Claim 44.

Patentability of Claims 52-58

New independent claim 52 is similar in scope to claim 19 of the parent application at the time of the final Office Action. Claim 19 was rejected under 35 U.S.C. 103(a) as being unpatentable over the Oguro patent in view of Bang et al. and U.S. Patent No. 6,240,240 to Nagano et al.

As discussed above, however, the Oguro patent is disqualified as §103 prior art since it is assigned to the same assignee as the present application.

Moreover, the Nagano et al. patent is also disqualified as §103 prior art. The Nagano patent and the present application were, at the time the present invention was made, subject to an obligation of assignment to the same organization, i.e., Sony Corporation. Such obligation is evidenced by the recording of assignment documents in the U.S. Patent and Trademark Office for the Nagano et al. patent and in the parent application of this application. The Nagano et al. patent issued on May 29, 2001 which was well after the U.S. filing date of December 18, 1997 of the present application. Thus, the Examiner has relied upon Nagano et al. in a rejection under 35 U.S.C. 103 through 35 U.S.C. 102(e).

Accordingly, since neither the Oguro nor Nagano et al. patents are proper prior art to the present application, any §103 rejections based thereupon cannot stand.

Claims 53-58 are believed patentable based at least upon their dependencies from Claim 52.

CONCLUSION

In light of the foregoing, entry of this Preliminary Amendment, and the allowance of this application with Claims 23-58 are respectfully requested.

The above statements concerning the disclosure in the cited references represent the present opinion of Applicants' representative and, in the event that the Examiner disagrees, Applicants' representative respectfully requests the Examiner specifically indicate those portions of the respective references providing the basis for a contrary view.

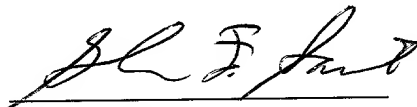
In the event that additional cooperation in this case may be helpful to complete its prosecution, the Examiner is cordially invited to contact Applicants' representative at the telephone number written below.

Attached hereto is a marked-up version of the changes made to the specification by the current amendment. The attached page is captioned **"Version With Markings to Show Changes Made."**

The Commissioner is hereby authorized to charge any insufficient fees or credit any overpayment associated with the above-identified application to Deposit Account 50-0320.

Respectfully submitted,
FROMMER LAWRENCE & HAUG LLP

By:



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

On Page 1\the following paragraph has been added: --This application is a continuation of application S/N 08/993,993, filed December 18, 1997.--

The paragraph beginning at line 6 on page 3 has been amended as follows:

--In addition, for [of] cassette tapes and discs for use in a rental business, rental data is controlled typically by using a ledger or a PC. In this case, a bar code representing control information such as the serial number of a cassette tape or a disc is printed on a label such as a seal which is then stuck to the cassette tape or the disc.--

The paragraph beginning at line 13 on page 3 has been amended as follows:

--In the case of an index card, however, the user [itself] himself must enter information on data recorded in the cassette tape or disc such as a recording date and a recording time by either writing the information [with the] by hand or printing it, raising a problem of very cumbersome work.--

The paragraph beginning at line 19 on page 3 has been amended as follows:

--In addition, as time goes by after data has been recorded, the user may forget the contents of the recording medium such as a cassette tape. In this case, the user verifies the contents of the cassette tape by playing back, rewinding or fast feeding the tape and then [enter] entering information on data recorded in the cassette tape including a recording date and a recording time, giving rise to a problem of cumbersome work.--

The paragraph beginning at line 24 on page 14 has been amended as follows:

--As described in claim 3, the [recordin] recording/reproduction [g/reproduction] apparatus according to claim 1 is characterized in that the recording/reproduction apparatus further has a medium accommodating means (implemented typically by a compartment 93 shown in Fig. 9) for accommodating the recording-medium assembly and the switching means switches the information transmitting/receiving means from one to another in accordance with whether or not the recording-medium assembly exists in the medium accommodating means.--

The paragraph beginning at line 22 on page 31 has been amended as follows:

--A compartment 93 forms a space for accommodating a cassette 100. A switch 94 is used for detecting whether or not a cassette 100 has been inserted into the compartment 93. The antenna 22-2 for communicating with a memory card 1 mounted on a cassette 100 existing outside the VTR 41 is designed to provide extremely [strong] high directivity to an electric wave radiated thereby, that is, directivity that does not have an effect on internal components of the VTR 41. To put it concretely, a metallic plate 92-2 is provided on the back surface of the antenna 22-2 to prevent an electric wave radiated by the antenna 22-2 from being directed to the inside of the VTR 41.--

The paragraph beginning at line 15 on page 33 has been amended as follows:

--As described above, the switch 94 is used for forming a judgment as to whether a cassette 100 exists in the inside or the outside of the VTR 41. [To put it in detail] More specifically, when a cassette 100 is inserted into the compartment 93, the switch 94 is pushed by the case of the cassette 100, detecting the insertion of the cassette 100 into the compartment 93. At that time, a signal indicating the insertion of the cassette 100 into the compartment 93 is supplied to the microcomputer 95 from the switch 94. In this way, the microcomputer 95 is

capable of forming a judgment as to whether a cassette 100 exists in the inside or the outside of the VTR 41.--

The paragraph beginning at line 2 on page 38 has been amended as follows:

--As information on the current position, data representing a halt position of the cassette 100 is stored. For example, data representing the time that has lapsed since the start of an operation to reproduce data is stored in terms of hours, minutes, seconds and frames. Accordingly, when a cassette 100 is mounted on the VTR 41 after being taken off once from the VTR 41, the current position of the cassette 100 can be displayed instantaneously. As a result, the [operatability] operability of the VTR 41 can be improved.--

The paragraph beginning at line 10 on page 42 has been amended as follows:

--Fig. 14 is a diagram showing a typical data structure of the video-recording-reservation data area shown in Fig. 11. The video-recording-reservation data area is used for storing information on a timer-based video-recording reservation. The microcomputer 95 employed in the VTR 41 reads in the information on a timer-based video-recording reservation through the reader/writer 21, comparing the information with the present time and [the date of today] date. If the information on a timer-based video-recording reservation is found valid, the microcomputer 95 sets the information in a timer circuit not shown in the figure, putting the VTR 41 in a video-recording reservation state. This function is simpler than the ordinary video-recording-reservation function which is executed by the user by operating the VTR 41 or a remote commander. This function is yet convenient for repeatedly recording an event such as a regular daily program.--

The paragraph beginning at line 4 on page 60 has been amended as follows:

--When the VTR 41 is put in a video-recording state without entering the title of a program using an EPG etc., there is [fear] concern that the title of the program is not input. That is to say, since a video-recording reservation etc. is made by the user by utilizing a screen such as the EPG, information on a program such as the title of the program can be obtained beforehand. When carrying out ordinary video recording, however, it is probable that information on a recorded program can not [probably] be obtained. In other words, since an EPG is supplied at time intervals of about five minutes to three hours, depending on the substance of the service, the title of a desired program can not be obtained in a real-time manner in some cases.--

The paragraph beginning at line 18 on page 73 has been amended as follows:

--In addition, various kinds of information [on data] pertaining to data recorded in a cassette or disc can be stored in the memory card 1 and the information can be used for simplifying operations to display the data, to reproduce a program, to make a timer-based video-recording reservation and to search a tape for a start position, to mention a few.--

The paragraph beginning at line 7 on page 76 has been amended as follows:

--Fig. 26 is a block diagram showing another typical configuration of the [meory] memory card 1 and the reader/writer 21. As shown in the figure, in this configuration, the antenna 2 employed in the memory card 1 is implemented by a coil 211 whereas the antenna 22 employed in the reader/writer 21 is implemented by a coil 232. Mutual electromagnetic inductive coupling is established between the coils 211 and 232.--

The paragraph beginning at line 21 on page 78 has been amended as follows:

The flow of processing then goes on to a step S62 at which the gate sequencer 201 forms a judgment as to whether or not data has been received from the [meory] memory card 1. It should be noted that the judgment can be formed by finding out whether or not the level of the

1. The first step is to identify the problem. This involves understanding the current situation and what needs to be changed.